Date: Sat, 2 Apr 94 04:30:16 PST
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #88
To: Ham-Ant

Ham-Ant Digest   Sat, 2 Apr 94   Volume 94 : Issue   88

Today's Topics:

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

Date: Mon, 28 Mar 1994 16:59:36 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!sol.ctr.columbia.edu!
newsxfer.itd.umich.edu!nntp.cs.ubc.ca!alberta!ve6mgs!mark@network.ucsd.edu
Subject: Discone vs 5/8 wave for 2m packet?
To: ham-ant@ucsd.edu

kcs@rx.uga.edu (Ken Schroder) writes:

>I have a 5/8 ground plane availible, which promises something like 3.6 db
>gain. I believe that a discone is supposed to be unity gain.

5/8 wave is 3.2 dBq, Discone is 0dBq

>So the question is, will there be enough difference between these antennas to
>make the trip to the roof worth while?

Yes, if not for the gain, the reduced noise on your receiver. A Discone
receives *everything* and will overload your radio's front end with pagers
and other sources of intermod.

>I'd like to put up something bigger or perhaps a beam, but I have covenant
>problems and need to stay real low profile.

Putting up a beam on packet radio may get you in a lot of hot water, packet
works on a cellular coverage basis. If you *must*, to get into a distant
repeater in a rural area, but if you are in an urban area, it's far better
to put up a good Omni-Directional (I use a Vertical Double-Zepp, 6.3dB gain),
than to become just another hidden transmitter ...

Ciao, 73 de VE6MGS/Mark -sk-

Date: 1 Apr 1994 01:57:00 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!uwm.edu!reuter.cse.ogi.edu!
netnews.nwnet.net!bach.seattleu.edu!quick!amc-gw!maunakea!uw-coco!mdisea!
usenet@network.ucsd.edu
Subject: Homebrew 2M/440 antenna
To: ham-ant@ucsd.edu

I would like to find a construction article on a dual band (146/440 MHz) antenna.
I have seen ones for satellite use but they have separate feedlines for each band.
I would like to find a single feedline version for use with a radio which has a
built in duplexer.

Thanks for the help.

Van, KI7AL

Date: 1 Apr 94 10:15:26 -0600
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!news.ans.net!mrtnt.ntrs.com!
tntvax!rs2@network.ucsd.edu
Subject: How to base-feed half-wave vertical?
To: ham-ant@ucsd.edu

I'm looking for advice on the best way to match coax to the bottom of a
half-wave vertical. Cushcraft does this for the multi-band R-5 with some type
of a proprietary network consisting of toroids, etc. I only want to match a
simple 20m half-wave vertical. I'd prefer not to do the match with a "J" type
of feed. I'd prefer some type of a matching network.

If you have any comments or experience, please let me know.

Please answer direct to:

--
Richard Steck, W9RS
Internet address: steck.richard@ntrs.com
Phone: 312-630-6622

Opinions expressed are my own and not those of my employer.

Date: 1 Apr 1994 17:35:15 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!math.ohio-state.edu!news.acns.nwu.edu!
casbah.acns.nwu.edu!rdewan@network.ucsd.edu
Subject: How to base-feed half-wave vertical?
To: ham-ant@ucsd.edu

In article <1994Apr1.101526.1@tntvax>,
Richard Steck, 312-630-6622 <rs2@tntvax.ntrs.com> wrote:
>I'm looking for advice on the best way to match coax to the bottom of a
>half-wave vertical. Cushcraft does this for the multi-band R-5 with some type
>of a proprietary network consisting of toroids, etc. I only want to match a
>simple 20m half-wave vertical. I'd prefer not to do the match with a "J" type
>of feed. I'd prefer some type of a matching network.
>
>If you have any comments or experience, please let me know.

Jerry Sevick, W2FMI, in his books and articles offers many solutions
in the form of transmission line transformers. Essentially a 16:1
followed by a 4:1 will do the trick. This is approximately the method that
Cushcraft uses in the R7.

In any case, any matching done should be right at the feed point
to keep losses low. The voltages can get quite large. Even with
just 100W, the voltage will be in the multi-KV range. Special care
and insulation would be required.

A much simpler solution would be to be use a tubular element
and insert the feed line into the tube at the bootom and feed it
in the middle. In this case, you can separate the two halves with
a fiber glass tube and use conventional feed or go for a Delta feed
inside the tube.

Rajiv
aa9ch
r-dewan@nwu.edu

Date: 31 Mar 1994 20:14:30 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!darwin.sura.net!udel!
news.sprintlink.net!hookup!news.kei.com!news.byu.edu!cwis.isu.edu!u.cc.utah.edu!
cs.weber.edu!val@network.ucsd.edu
Subject: RF leakage from coax?
To: ham-ant@ucsd.edu

I know that coaxial cable leaks RF. Why?

Coaxial cable leaks with frequencies well below 1GHz, but there are no
(easily) visible holes in the braid. Microwave ovens (at 2.8GHz) have
doors with 2mm holes that let (significant) light through but (apparently)
no (appreciable) radiation. What's up? Do microwave ovens leak but no
one has bothered to tell the public that they shouldn't stand in front
of them and stare? Or do microwave ovens have the advantage of the
shield not being the signal carrier (as with coaxial cable)?

Inquiring minds....

- 73 -
-=:[VAL]:=-

--
|================= #include <stddisclaimer.h> ================/// KB7VBF/P11 =|
| "AMIGA: The computer for the creative mind" (tm) Commodore /// Weber State |
| "Macintosh: The computer for the rest of us"(tm) Apple \\\///   University |
|== "I think, therefore I AMiga" -- val@csulx.weber.edu ==\///= Ogden UT USA =|

Date: Thu, 31 Mar 1994 21:00:22 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!agate!howland.reston.ans.net!math.ohio-
state.edu!magnus.acs.ohio-state.edu!csn!col.hp.com!srgenprp!alanb@network.ucsd.edu
Subject: RF leakage from coax?
To: ham-ant@ucsd.edu

Val Kartchner (val@cs.weber.edu) wrote:

: I know that coaxial cable leaks RF. Why?

: Coaxial cable leaks with frequencies well below 1GHz, but there are no
: (easily) visible holes in the braid.

Sure there are! Good-quality cable is generally specified at 95 % braid
coverage and poor-quality cable is much worse. 5% of "hole" is only
26 dB down from 100%. (Yeah, I know braid coverage doesn't equate to dB
of leakage, but I'm talking qualitatively here. :=) Note that coax with

solid shield has MUCH less leakage than braid-type coax.

: Microwave ovens (at 2.8GHz) have
: doors with 2mm holes that let (significant) light through but (apparently)
: no (appreciable) radiation. What's up? Do microwave ovens leak but no
: one has bothered to tell the public that they shouldn't stand in front
: of them and stare? Or do microwave ovens have the advantage of the
: shield not being the signal carrier (as with coaxial cable)?

I think it's partly a matter of how many dB's you care about. If the
door of the oven attenuates the 600 watts inside by 40 dB, than only
60 milliwatts leaks out, which won't hurt you. But 40 dB would be
inadequate shielding on a sensitive receiver located near powerful
sources of interference.

AL N1AL

End of Ham-Ant Digest V94 #88
****